March 14, 2003
1420 East 6th Ave.
P.O. Box 200701
Helena, MT 59620-0701

Environmental Quality Council
Montana Department of Environmental Quality
Montana Department of Fish, Wildlife and Parks
    Fisheries Division
    Endangered Species Coordinator
    Native Species Coordinator, Fisheries
    Bozeman Office
Montana State Library, Helena
MT Environmental Information Center
Montana Audubon Council
Park Conservation District
U.S. Army Corp of Engineers, Helena
U.S. Fish and Wildlife Service, Helena
State Historic Preservation Office, Helena
Joe Brooks Chapter Trout Unlimited
Bruce Rauner, P.O. Box 229, Clyde Park, MT 59018
Confluence Consulting, Inc., P.O. Box 1133, Bozeman, MT 59715

Ladies and Gentlemen:

Please find enclosed an Environmental Assessment prepared for the Future Fisheries Improvement Program. The Program tentatively plans to provide funding for a stream channel restoration project on a degraded reach of Brackett Creek, a tributary to the Shields River. This proposed project is located on properties owned by Bruce Rauner approximately two miles southwest of the town of Clyde Park in Park County.

Please submit any comments that you have by 5:00 P.M., April 15, 2003 to the Department of Fish, Wildlife and Parks in Helena at the address listed above. Completion of this project is contingent upon approval being granted by the Fish, Wildlife and Parks Commission. If you have any questions, feel free to contact me at (406) 444-2432. Please note that this draft EA will be considered as final if no substantive comments are received by the deadline listed above.

Sincerely,

Mark Lere, Program Officer
Habitat Protection Bureau
Fisheries Division
e-mail: mlere@state.mt.us

ENVIRONMENTAL ASSESSMENT
Fisheries Division
Montana Fish, Wildlife and Parks
Brackett Creek Channel Restoration Project

General Purpose: The 1995 Montana Legislature enacted statute 87-1-272 through 273 which directs the Department to administer a Future Fisheries Improvement Program. The program involves physical projects to restore degraded fish habitat in rivers and lakes for the purpose of improving wild fisheries. The legislature established an earmarked funding account to help accomplish this goal. Additionally, the 1999 Montana Legislature amended statute sections 87-1-273, 15-38-202 and Section 5, Chapter 463, Laws of 1995 to create a bull trout and cutthroat trout enhancement program. The program calls for the enhancement of bull trout and cutthroat trout through habitat restoration, natural reproduction and reductions in species competition by way of the Future Fisheries Program.

The Future Fisheries Improvement Program is proposing to provide funding for a project calling for the restoration of a nearly 4-mile reach of Brackett Creek. The intent of this project is to enhance habitat conditions and improve population connectivity for Yellowstone cutthroat trout and other salmonids in Brackett Creek. Brackett Creek is a tributary to the Shields River that provides spawning and rearing habitat for both resident and fluvial forms of cutthroat trout and other salmonids. The project site is located approximately two miles southwest of the town of Clyde Park in Park County (Figure 1).

I. Location of Project: This project will be conducted on Brackett Creek, a tributary to the Shields River, located approximately two miles southwest of the town of Clyde Park within Township 1 North, Range 9 East, Sections 4,5,6,8 and 9 in Park County. The project will be undertaken on property owned by Bruce Rauner on the Lazy S Ranch.

II. Need for the Project: One goal within Montana Fish, Wildlife and Parks six-year plan of operation for the fisheries program is to "restore and enhance degraded habitat" by implementing habitat restoration projects and administering the Future Fisheries Improvement Program to restore important habitats on public and private lands. This proposed project would help achieve this goal.

A significant portion of Bracket Creek on the Lazy S Ranch is in a degraded condition as a result of past land use practices intended to increase agricultural production. Approximately 3,100 feet of the stream has been channelized, woody shrubs within the riparian corridor have been mechanically or chemically removed and the entire stream corridor has been overgrazed. These channel alterations have lead to extensive bank erosion and the loss of pool habitat. The stream channel is now characterized by low sinuosity, moderate entrenchment and poor fish habitat. Currently, this reach of Brackett Creek supports low numbers of brown trout and a remnant population of Yellowstone cutthroat trout. The new owners of the Lazy S Ranch are interested in restoring the geomorphic and biological function of Brackett Creek through proposed channel restoration work and with progressive land management practices.

III. Scope of the Project:

The project proposes to restore a nearly 4-mile reach of Brackett Creek. Restoration activities call for re-constructing approximately 3,120 feet of channelized stream, stabilizing nearly 7,000 feet of eroding stream bank and removing an abandoned diversion structure that is acting as a fish barrier. To re-

naturalize straightened reaches of the stream, the historic channel alignment will be excavated to an appropriate dimension, pattern and profile. Portions of the historic channel are readily visible from existing topography and historic air photos and will be used in re-construction to identify proper channel alignment. In locations where the historic channel alignment is not apparent, an upstream reference reach will be used to determine appropriate channel geometry. Material excavated from the new channel will be use to construct low elevation berms on the old straightened channel to create a wetland complex. Riparian vegetation found along the channelized segments of the stream will be salvaged and transplanted at strategic locations along the new channel. Eroding stream banks will be stabilized using bioengineering techniques. The primary stabilization technique will involve grading cut-banks back to a t least a 3 to 1 slope and planting the toe of the bank with mature willow clumps borrowed from existing thickets. Fencing will be installed along the entire valley bottom to protect the riparian corridor. To enhance fish passage, an abandoned irrigation structure will be removed from the stream channel. This project is expected to cost $725,000.00. Of this total, the Future Fisheries Improvement Program would be contributing up to $20,000.00 to complete the project. Confluence Consulting Inc., a stream restoration company, will provide project design and oversight.

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment

1. Terrestrial and aquatic life and habitats.

Restoring the degraded stream channel and stabilizing eroding stream banks on Brackett Creek are expected to create healthier habitat for aquatic life by lengthening the channel, reducing sediment loading and creating greater environmental complexity. Expected improvements in the aquatic habitat should enhance salmonid recruitment to the Shields River, as well as resident populations in the stream. Habitat for riparian dependent wildlife also would be improved by enhancing the riparian vegetative community through significant re-vegetation efforts along the stream margin and by protecting the corridor with fencing to exclude livestock. In contrast, the project will adversely effect beaver populations within this reach of stream because of plans to remove beaver dams and control beaver populations until the stream channel has recovered sufficiently to support beaver activity without significant detrimental effect. Removal of beaver activity is needed over the short term to prevent Brackett Creek from being diverted across the floodplain.

2. Water quantity, quality and distribution.

Short-term increases in turbidity will occur during project construction. To minimize turbidity, construction will occur during a low flow period and operation of equipment in the stream channel will be minimized to the extent practicable. Construction of the new stream reach would be completed in segments before water is turned in from the existing active channel. The Department of Environmental Quality will be contacted to determine narrative conditions required to meet short-term water quality standards and protect aquatic biota. A 310 permit will be obtained from the local Conservation District. In the long term, restoring the existing channel would reduce sediment and nutrient contributions to downstream areas, thereby improving the overall quality of

downstream waters.

3. Geology and soil quality, stability and moisture.

Soils along the stream margin would be disturbed during construction of the new channel, but would be stabilized with substantial re-vegetation efforts. Overall, the project is expected to reduce bank erosion and improve channel stability by returning the stream to a natural meander pattern and by providing access to the floodplain.

4. Vegetation cover, quantity and quality.

Riparian vegetation would be disturbed during the period of construction. However, proposed re-vegetation efforts, in conjunction with implementing a livestock grazing plan and riparian fencing, would result in a significant overall improvement to the riparian vegetation.

5. Aesthetics.

During the period of construction, aesthetics would be adversely impacted due to on-site construction activities and the presence of heavy equipment. In the long term, aesthetics would be enhanced by restoring a degraded reach of Brackett Creek to a healthier and more natural stream environment. Additionally, the riparian vegetative community would be enhanced by substantial re-vegetation efforts along the margins of the channel and by fencing the riparian corridor to better manage livestock.

7. Unique, endangered, fragile, or limited environmental resources.

Brackett Creek supports fluvial and resident forms of Yellowstone cutthroat trout. Yellowstone cutthroat trout is a species of special concern in Montana. Improvements made to Brackett Creek are expected to benefit Yellowstone cutthroat trout populations both in the stream and in the Shields River.

9. Historic and archaeological sites

The proposed project likely will require an individual Army Corp of Engineers 404 permit. Therefore, the State Historic Preservation Office has been contacted to determine the need for compliance with the federal historic preservation regulations. The project will not begin until a cultural clearance is granted.

VI. Explanation of Impacts on the Human Environment.

4. Agricultural or industrial production

Fencing the riparian corridor to protect the vegetative community is expected to remove approximately 20 acres from livestock grazing and hay production.

7. Access to & quality of recreational activities.

This project intends to improve recruitment of salmonids to the Shields River and Brackett Creek. As a result, the recreational fisheries on the river and creek are expected to improve.

13. Locally adopted environmental plans & goals.

The contribution of funding through the Future Fisheries Improvement Program is providing match to the Natural Resources and Conservation Service's Environmental Quality Incentives Program and the Wildlife Habitat Incentives Program for completion of this restoration project.

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no action is taken, this reach of Brackett Creek will remain degraded, resulting in continued bank erosion, simplified aquatic habitat and a sparse riparian vegetative community. This reach of altered stream will continue to provide only minimal recruitment of salmonids to the Shields River. Additionally, habitat for riparian dependent wildlife will remain in a degraded condition. Recreational opportunities associated with fish and wildlife resources will remain reduced and aesthetics will continue to be impaired.

2. Conduct habitat restoration within the existing channelized stream reach

This alternative would not resolve the entrenched nature of the existing straightened channel nor would the alternative create additional stream length. Restoration efforts commonly fail when attempted in an entrenched channel due to the inability of the stream to access its floodplain. Confined flows in an entrenched channel commonly create excessive shear stresses that erode constructed stream banks. Overall, entrenched channels tend to be unstable.

3. The Proposed Alternative

The proposed alternative is designed to restore approximately 4 miles of degraded channel on Brackett Creek. This restoration work would provide for more diverse aquatic habitat and a more functional channel and floodplain. This alternative would lengthen the existing channel and would greatly improve the diversity of aquatic habitat in the stream. This alternative would improve fish and wildlife habitat, aesthetics and water quality within the project area and would be expected to increase trout populations both in the creek and in the Shields River.

VIII. Environmental Assessment Conclusion Section

1. Is an EIS required? No.

We conclude from this review that the proposed activities will have a positive impact on the physical and human environment.

2. Level of public involvement.

The proposed project was reviewed and supported by the public review panel of the Future Fisheries Improvement Program. The proposed project also will be reviewed by the Fish, Wildlife and Parks Commission and will be contingent upon their approval. The Environmental Assessment (EA) is being distributed to all individuals and groups listed on the cover letter. The EA will be published on Montana Fish, Wildlife and Park's web page.

3. Duration of comment period?

Public comment will be accepted through 5:00 PM on April 15, 2003.

4. Person responsible for preparing the EA.

Mark Lere, Program Officer
Habitat Protection Bureau
Fisheries Division
Montana Department of Fish, Wildlife and Parks
1420 East 6th Avenue
Helena, MT 59620
Telephone: (406) 444-2432
e-mail: mlere@state.mt.us

MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS
1420 E 6th Ave, PO BOX 200701, Helena, MT 59620-0701
(406) 444-2535

ENVIRONMENTAL ASSESSMENT

Project Title Brackett Creek Channel Restoration Project

Division/Bureau Fisheries Division -Future Fisheries Improvement
Description of Project The Future Fisheries Improvement Program is proposing to provide funding for a project calling for the restoration of a degraded reach of Brackett Creek, a tributary to the Shields River. The channel would be restored to a proper channel dimension, pattern and profile and eroding stream banks would be stabilized using bioengineering techniques. The project site is located on properties of the Lazy S Ranch owned by Bruce Rauner approximately two miles southwest of the town of Clyde Park in Park County.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture			X			X
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources			X			X
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites				X		X

POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production			X			X
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities			X			X
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		X
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction Park Conservation District, US Fish and Wildlife Service, US Army Corp of Engineers, Montana Department of Environmental Quality, State Historic Preservation Office

Individuals or groups contributing to this EA Confluence Consulting, Inc.

Recommendation concerning preparation of EIS No EIS required.

EA prepared by: Mark Lere
Date: February 25, 2003